UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,893	07/24/2003	Thinh Nguyenphu	59643.00269	1188

32294   7590   01/10/2008
SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER
ZEWDU, MELESS NMN

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
01/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/625,893	NGUYENPHU, THINH
Office Action Summary	Examiner	Art Unit
	Meless N. Zewdu	2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *12 October 2007*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-37 and 40-42* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-37 and 40-42* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This action is in response to the communication filed on 10/12/07.

2.   Claims 38-39 have been canceled in this amendment.

3.   Claim 42 has been added in this amendment.

4.   Claims 1-37 and 40-42 are pending in this action.

5.   This action is final.

Claim Rejections - 35 USC § 112

Claims 1, 15, 37 and 40-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this regard, each of the above claims includes a feature that recites as, "--- **other than the absence to said one or more messages directed to the mobile device**". This feature would not have been clear for one of ordinary skill in the art because it encompasses every condition other than the one or more messages of absence and a condition that is not defined is vague and indefinite. Furthermore, this feature also lacks positive recitation as indicted by the phrase, "**other than**" (emphasis added).

Claims 1, 41and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this regard each of the above mentioned

claims recite a feature as "**if the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages** --- ". This feature implicitly fails to send the core network the one or more messages upon the monitoring indicates that the at least one or more condition is not met. In other words, the system would not work unless said one or more condition is met. Examiner suggests that an alternative, when the 'if' condition fails, be provided so as to enable the system defined by the claims mentioned does some thing when said condition is fails.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6, 8-11, 13-17, 20, 22-37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komandur et al. (Komandur) (US 2003/0137948 A1) in view of Yarwood (US 6,161,016).

As per claim 1: Komandur discloses a packet data communication system, comprising:

at least one access network configured to provide a wireless interface between a mobile device and the at least one access network for communication of packet data (see abstract; paragraph 0032);

a core network comprising at least one core network node for supporting

communication of packet data on the wireless interface (see paragraph 0032); and

a controller/switch provided in association with the at least one access

network, and configured to monitor at least one condition associated with the

wireless interface (see paragraphs 0045, 0064), other than the absence of said

response to said one or more message directed to the mobile device (see paragraph

0064), and if the monitoring indicates that the at least one condition is met, to generate

and send to the core network node one or more messages/ACK in response to one or

more of said one or more messages from the core network node (see paragraphs 0057,

0064). Note: the phrase, "other than the absence of said response to said one or more

message directed to the mobile device" is so broad that it could read on ACK, or a

mobile being reachable, etc., as stated in paragraph 0064. But, Komandur does not

explicitly teach about releasing a communication link associated with a mobile device in

the absence of a response to one or more messages/pages directed to the mobile

device, as claimed by applicant. However, in the same field of endeavor, Yarwood

teaches about a cellular radio system provided with a facility for broadcasting from a

control center (see abstract) paging signals to mobile stations further including, if no

mobiles respond to a page repetition from a base station, then it may be assumed that

there are not longer any mobiles in the cell and the channel can be released by the

broadcast center (see col. 7, lines 40-52). Therefore, it would have been obvious for

one of ordinary skill in the art at the time the invention was made to modify the teaching

of Komandur with that of Yarwood for the advantage of reaching a mobile that is still within the cell, but missed a paging attempt (see col. 7, lines 44-47).

As per claim 15: the features of claim 15 are similar to the features of claim 1, except claim 15 is directed to a method comprising the steps to be performed by the system of claim 1. In other words the steps of claim 15 are required for the system of claim 1 to perform its intended function and the system of claim 1 is required so as to perform the steps of claim 15. Hence, claim 15 is rejected on the same ground and motivation as claim 1 since the method is required by the system.

As per claim 32: the features of claim 32 are similar to the features of claim 1, except, in response to receiving the notification (of the mobile being out of reach), retaining said data communication link but pausing from sending further data packets from the core network to the mobile device, which is taught by Komandur (see paragraphs 0045; 0049); and processing the data packets in accordance with a predefined policy, taught by Komandur (see abstract), wherein congestion control and avoidance can be considered as a data packet processing policy. Furthermore, it is to be noted that the feature, "notifying the core network that the mobile device is out of reach" could be realized when the Komandur's reference (data network) is modified by Yarwood's references (paging/locating technique).

As per claim 37: the features of claim 37 are similar to the features of claim 1, except detection means for detection at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met, which is taught by Komandur (see paragraphs 0045, 0049, 59, claim 1). Any of the

conditions in Komandur's reference, i.e., the mobile being out of reach or/and lost

packets, can be considered as triggering conditions. Furthermore, the core network

postponing/delaying the release of said release link in response to such further

message is also taught by Komandur (see paragraph 0045).

As per claim 40: the features of claim 40 are similar to the features of claim 1, wherein

the first sending unit is the paging source and the second sending unit is the response

source that includes the intermediaries (BSC or BSS or BS), as provided by the

combined references. Furthermore, regarding the at least one trigger conditions

associated with the wireless interface, the packet data that indicates that the mobile is

unreachable (paragraphs 0045-0046) or the time out priority (paragraphs 0049, 0059)

could be considered as trigger condition since the claim does not say what is being

triggered. Therefore, claim 40 is rejected on the same ground and motivation as claim

1.

As per claim 41: the features of claim 41 are similar to the features of claim 1, except

generating and sending a response message on behalf of the mobile device, which is

taught by (see col. 7, lines 44-52); and postponing release of said data communication

link which is taught by Komandur (see paragraph 0045). Therefore, claim 41 is rejected

on the same ground and motivation as claim 1.

As per claim 42: the features of claim 42 are similar to the features of claim 41, except

claim 42 is directed to a method comprising the steps required to be followed by the

apparatus of claim 41. Hence, since the method is required by the apparatus and the

apparatus is obviated by the combination of references discussed in claims 1 and 41 above, claim 42 s rejected on the same ground and motivation as claim 41.

As per claim 2: Yarwood teaches a communication system, wherein the controller is configured to monitor a condition associated with signal strength on the wireless interface (see col. 7, lines 40-52). Determining "no response" is a function of monitoring.

As per claim 3: Vanttinen teaches a communication system, wherein the controller is configured to monitor the condition, wherein the condition is associated with the signal strength, and wherein the signal strength comprises the signal strength of uplink link layer frames (see col. 9, lines 8-19). Packet data includes frames.

As per claim 6: Yarwood teaches a communication system, wherein the controller is configured to monitor a condition associated with paging of the mobile device (see col. 7, lines 40-52).

As per claim 8: Yarwood teaches about a communication system, wherein the controller is configured to monitor pilot signals from the mobile device (see col. 7, lines 40-52).

As per claim 9: Komandur teaches a communication system, wherein the core network node comprises an access gateway (see fig. 1; paragraph 0004). Block 120 must have a gateway to access the network (110).

As per claim 10: Komandur teaches about a communication system, wherein the access gateway comprises a packet data support node (see fig. 1; paragraphs 0030-0033).

As per claim 11: Komandur teaches about a communication system, wherein the

controller is provided in a base station controller (see fig. 1; paragraphs 0032). A

wireless network, like fig. 1), includes a base station controller, which is know to control

base stations. This feature is also provided in Yarwood reference (see (BSS).

As per claim 12: Komadur teaches about a communication system, wherein the

controller is provided in a packet function associated with the access network (see

paragraph 0046).

As per claim 13: Yarwood teaches a communication system, wherein the controller is

configured to respond to messages that are sent to the mobile device on behalf of the

mobile device (see col. 7, lines 44-52).

As per claim 14: Komandur teaches about a communication system, wherein the

controller is configured to send a notification regarding the status of the wireless

interface in response to a message from the core network (see paragraph 0045).

Mobile reach-ability is a status data.

As per claim 16: the feature of claim 14 is similar to the feature of claim 2, except

'falling below a threshold', which is well known in the art and would have been obvious

to implement one for the purpose of determining a useable strength of a signal. Hence,

claim 16 is rejected on the same ground and motivation as claim 2.

As per claim 17: the feature of claim 17 is similar to the feature of claim 3. Hence,

claim 17 is rejected on the same ground and motivation as claim 3.

As per claim 20: Komandur teaches about a communication method, wherein the step

of detecting comprises detecting that the mobile device has not responded to a paging

message (see paragraphs 0045, 0049; claim 2). When the references are combined, as

discussed above, whether or not the mobile responds can be determined using

Yarwood's paging/broadcast technique.

As per claim 22: the feature of claim 22 is similar to the feature of claim 8. Hence,

claim 22 is rejected on the same ground and motivation as claim 8.

As per claim 23: the feature of claim 23 is similar to the feature of claim 13. Hence,

claim 23 is rejected on the same ground and motivation as claim 13.

As per claim 24: Komandur teaches a method, wherein the step of sending the

message from the core network node comprises a request, and wherein the data

communication link is maintained only if the request is responded to within a

predetermined time/delay (see paragraph 0045).

As per claim 25: the feature of claim 25 is similar to the feature of claim 14. Hence,

claim 25 is rejected on the same ground and motivation as claim 14.

As per claim 26: the feature of claim 26 is similar to the feature of claim 14, except

expressing the status of the wireless interface in a binary value, which is (must be) an

obvious feature in Komandur's packet data communication network.

As per claim 27: the feature of claim 27 is similar to the feature of claim 1. Hence,

claim 27 is rejected on the same ground and motivation as claim 1.

As per claim 28: the feature of claim 28 is similar to a feature addressed in the

As per claim 29: the feature of claim 29 is similar to the feature of claim 37. Hence,

claim 29 is rejected on the same ground and motivation as claim 37.

As per claim 30: Komandur teaches a method, further comprising the step of deciding

whether data packets may be dropped or buffered in response to detection by

the controller that the at least one trigger condition is met (see paragraphs 0045, 0049).

As per claim 31: the feature of claim 31 is similar to one of the features addressed in

the rejection of claim 32. Hence, claim 31 is rejected on the same ground and

motivation as claim 32.

As per claim 33: the feature of claim 33 is similar to one of the features addressed in

the rejection of claim 32. Hence, claim 33 is rejected on the same ground and

motivation as claim 32.

As per claim 34: the feature of claim 34 is similar to one of the features addressed in

the rejection of claim 1. Hence, claim 34 is rejected on the same ground and motivation

as claim 1.

As per claim 35: the feature of claim 35 is similar to the feature of claim 30. Hence,

claim 35 is rejected on the same ground and motivation as claim 30.

As per claim 36: Komandur teaches a method, further comprising steps of detecting at

the controller that the mobile device can be reached, notifying the core network

that the mobile device can be reached, and in response to receiving the notification at

the core network, continuing sending of data packets from the core network to the

mobile device via the data communication link (see paragraphs 0045, 0049)..

Claims 4, 5, 18 and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the references applied to the claims above, and further in view of

Sivalingham (US 7,154,903 B2).

As per claim 4: the references applied to the claims above do not explicitly teach about a condition that comprises expiration of a timer, as claimed by applicant. However, in the same field of endeavor, Sivalingham teaches about a packet control function (fig. 1, element 18) communicatively coupled with a BSC and a PDSN, wherein the PCF, in response to receiving data for a dormant mobile terminal, starts a reactivation timer to set a time within which the mobile must establish connection with the network (see at least the abstract). It is to be noted that the PCF is coupled with the radio access controller (BSC) and thus can be considered as in the service of the controller. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Sivalingham for the advantage of managing networks that maintain dormant or inactive packet data session for mobile terminals (see col. 1, lines 7-10).

As per claim 5: Sivalingham teaches a communication system, wherein the controller is configured to monitor the condition that comprises the expiration of the timer and wherein the timer is configured to expire before the expiration of the message (see at least, col. 2, lines 29-40).

As per claim 18: Sivalingham teaches a method, wherein the step of detecting comprises detecting an expiration of a timer that is associated with the message from the core network node (see col. 2, lines 29-40; col. 3, line 65-col. 4, line 55; col. 6, lines 7-58). When the references are combined the Sivalingham time could be associated with the core message discussed in the rejection of the claims above. Motivation is as provided in the rejection of claim 4 above.

As per claim 19: Sivalingham teaches a method, further comprising sending the message as a response to the message from the core network before the expiration of the message from the core network (see col. 6, lines 7-58). When the references are combined as discussed above, the Sivalingham timer could be associated with the message, as a response to the message from the core network, before the expiration of the message from the core network. Motivation is as provided in the rejection of claim 4 above.

Claims 7 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claim 15 above and further in view of Lim (US 2002/0057658 A1). For examination purpose, claim 21 is considered first.

As per claim 21: the references applied to claims 15 do not explicitly teach about a method, wherein the step of detecting comprises detecting that the registration of the mobile device in the access network has expired, as claimed by applicant. However, in the same field of endeavor, Lim teaches about serving packet dormant handoff in mobile communication system, wherein periodically, when the registration life time of the BSC/PCF link registration is expired, the BSC/PCF shall renew the registration by registration request message (see paragraph 0015). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of LIM for the advantage of releasing a radio packet link of an old packet control function (see paragraph 0022).

As per claim 7: the feature of claim 7 is similar to the feature of claim 21. Hence, claim 7 is rejected on the same ground and motivation as claim 21.

Response to Arguments

Applicant's arguments filed on 10/12/07 have been fully considered but they are not persuasive. Following is applicant's presentation of arguments and corresponding examiner's responses.

Argument I: with regard to claims 1, 15, 37, and 40-42, applicant argues by saying the Office Action, dated January 11, had recognized that Komandur fails to teach or suggest, "if the monitoring indicates that the at least one or more condition is met, to generate and send to the core network node one or more message in response to one or more of said one or more messages from the core network node".

Response I: examiner respectfully disagrees with the argument. First examiner respectfully disagrees with the characterization of the Office Action, as recognizing that Komandur fails to teach or suggest the above quoted feature. Second, the feature in question, (as quoted above) is function only if the "if" condition is met and non-functional otherwise. Furthermore, in Komandur's packet data network a determination is made as to when or if the mobile device is reachable or not reachable. Examiner considers Komandur's teaching of determining, "**if the mobile is reachable or unreachable**", as one or more conditions that are met. The fact that the network responded to each of these conditions (e.g., storing data) is evidence that the same network has knowledge or received message/notification about the mobile device. Thus, examiner did not find the argument convincing.

Argument II: with regard to claim 32, applicant argues by saying the Office

Action, dated January 11, had also recognized that Komandur fails to teach or suggest,

"notifying a core network that the mobile device is out of reach; and in response to

receiving the notification, retaining said data communication link but pausing from

sending further data packets from the core network to the mobile device and processing

the data packets in accordance with predefined policy".

Response II: examiner respectfully disagrees with the argument. In that,

Komandur teaches/discloses determining as whether the mobile device is reachable or

not and if not reachable stores the data until the mobile device becomes reachable (see

paragraph 0045). Storing the data and waiting until the mobile device become

reachable is pausing. The network (core network) does the storing and waiting until the

mobile device is determined as reachable based on either notification or knowledge or

message or page response, it must have, about the mobile device. In other words, data

storage is made in response to the mobile being unreachable, and data transmission

made is made in response to the mobile device being reachable. Thus, the argument is

unpersuasive.

Argument III: applicant asserts that Yarwood does not teach or suggest sending

any message from the base station to the broadcast center when a paging attempt fails

to get a response.

Response III: examiner respectfully disagrees with the argument. As an initial

matter, examiner notes that applicant's characterization of Yarwood's reference, as it

relates to the rejection, is broad-based and deviated from what is applied by examiner.

The aspect of Yarwood's teaching applied by examiner is the teaching about releasing a

link after a repeated paging results in no response. The page repetition (successive

paging) is performed by a base station, as it should be, and the channel releasing is

made by a broadcast center. The successive paging is carried out before releasing the

channel/link, incase the mobile responds to the next page upon failing to respond to the

first one. Nonetheless, the channel/link is released upon the failing of the successive

paging. Komandur, as pointed out in the body of the rejection above, does not explicitly

teach about releasing a link to an absence mobile device. A skilled artisan, familiar to

both Komandur's and Yarwood's references, would be tempted to modify the

references, as shown in the rejection of claim 1 above. Thus, the argument is not

persuasive.

      Argument IV: with regard to claims 15, 37, and 40-42, applicant argues by

saying a combination of Komandur and Yarwood fail to teach or suggest, "a controller --

- configured to monitor at least one condition associated with the wireless interface

other than the absence of said response to said one or more messages directed to the

mobile device".

      Response IV: examiner respectfully disagrees with the argument for the

following reasons. First, the above quoted feature does not have or carry a patentable

weight as it recites an **unknown condition**, as indicated by the phrase, "at least one ---

other than --- the absence of said response". The claimed feature triggers the question,

what is the condition sought to be patented? Or is a condition other than what is

provided patentable? Examiner doesn't think so. The feature is vague and indefinite,

and doe not constitute patentability. Any argument not responded to is because it is found (or considered) to be a restatement/repetition or not point out.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N. Zewdu whose telephone number is (571) 272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Appiah Charles can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Meless Zewdu

Patent examiner

27 December 2007